

NOTES ON POLYGONUM. V

J. F. Brenckle

Polygonum Exsiccatum (Avicularia) Fascicle II.

- No. 26. Polygonum aviculare L. var. ascendens Montand
 No. 27. Polygonum aviculare L. var. neglectum Rchb.
 No. 28. Polygonum aviculare L. var. rurivagum Gentil.
 No. 29. Polygonum aviculare L.
 No. 30. Polygonum aviculare L. var. procumbens Hayne
 No. 31. Polygonum aviculare L. form caespitosum A. & G.
 No. 32. Polygonum heterophyllum Lindm. form rubescens (Small)
 Brenckle, new status
 No. 33. Polygonum heterophyllum Lindm. form rubescens (Small)
 Brenckle, new status
 No. 34. Polygonum calcatum Lindm.
 No. 35. Polygonum calcatum Lindm.
 No. 36. Polygonum buxiforme Small
 No. 37. Polygonum buxiforme Small form montanum Brenckle, new
 form
 No. 38. Polygonum buxiforme Small form montanum Brenckle, new
 form
 No. 39. Polygonum leptocarpum Robins.
 No. 40. Polygonum patulum M. Bieb.
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 No. 42. Polygonum Watsonii Small
 No. 43. Polygonum Watsonii Small
 No. 44. Polygonum Watsonii Small
 No. 45. Polygonum Watsonii Small var. alpinum Brenckle, new
 variety
 No. 46. Polygonum polygaloides Meisn. form montanum Brenckle,
 new form
 No. 47. Polygonum confertiflorum Nutt.
 No. 48. Polygonum consimile Greene
 No. 49. Polygonum Austinae Greene
 No. 50. Polygonum Parryi Greene

- Nos. 26 to 33. Polygonum aviculare L. no doubt originated in Europe and has developed there into many races and forms. An attempt is made to fit names used and applied by Ascherson & Graebner to the varieties described in Europe.
- No. 26. Polygonum aviculare L. var. ascendens Montand
The stems are spreading, reclining, the ends ascending; the leaves are round at the ends. The specimen is a late summer form.
- No. 27. Polygonum aviculare L. var. neglectum Rchb.
Stems thin, mostly flat on the ground; leaves very narrow, linear, sharply pointed. Most American specimens so named are not the above, but late summer forms with reduced leaves of P. aviculare.
- No. 28. Polygonum aviculare L. var. rurivagum Gentil.
Plants mostly erect, stems thin, leaves narrow and sharply pointed; achenes usually smaller than in var. neglectum, 1.5 mm. long.
- No. 29. Polygonum aviculare L.
Plants are erect, or, where scattered or trampled upon, the stems are spreading and ascending or are flat on the ground.
- No. 30. Polygonum aviculare L. var. procumbens Hayne
Plants robust, flat on the ground, very common on trampled ground, roads, paths, in schoolyards, etc.
- No. 31. Polygonum aviculare L. form caespitosum A. & G.
The plant has many slender stems arising from the rootstock. It is a form common about sidewalks and is due to the destruction of the early stems.
- Nos. 32 & 33. Polygonum heterophyllum Lindm. form rubescens
(Small) Brenckle, new status
Small's description of Polygonum rubescens in Bull. Torrey Bot. Club 33: 56 (1906), for which this is a new status, gives no reference as to why the epithet 'rubescens' was applied to this plant nor does the type specimen show any particular coloration. Specimens collected in Alberta by Dr. George Turner do show a red tint on parts of the plant body and the flowers. These specimens, as well as the type, are stout forms of P. heterophyllum Lindm., a common species in Canada. There is nothing in Small's description nor in Rydberg's manuals to distinguish it from P. heterophyllum.

Nos. 34 & 35. Polygonum calcatum Lindm.

Ascherson & Graebner give the following description: "Stems flat on the ground; leaves small, elliptic, ovate, or obovate, nerved beneath, pale or gray-green, the upper similar to the lower; pedicels articulated above; perianths slit to the middle, constricted, the sections light-green with white edges; stamens 5; achenes 2--2.5 mm. long, broadly ovate to lanceolate, compressed near the top, smooth or rarely punctate or striate, black."

No. 36. Polygonum buxiforme Small

Annual or perennial; stem usually prostrate, 3--12 dm. long; leaves oblong, elliptic, or oblanceolate, 0.5--2.5 cm. long, usually obtuse, often crisped on the margin; perianth 2--2.5 mm. long; achene 2--2.5 mm. long, dark brown, usually dull, granular or smooth.

Nos. 37 & 38. Polygonum buxiforme Small form montanum Brenckle, new form

Plantae montanae lucidae simplices erectae 1--10 cm. altae, saepe ramosae reclinatae.

Plants from high elevations, 6000 to 10,000 feet altitude, are lighter in color, simple, erect, from 1 to 10 cm. high, sometimes branched and reclining at somewhat lower altitudes.

No. 39. Polygonum leptocarpum Robins.

Plants similar to P. prolificum, but more slender and the achenes 3 mm. long.

No. 40. Polygonum patulum M. Bieb.

Stems single or few, erect, branched with slender elongated twigs, the stem-sections elongated; leaves elongate, pointed at each end; ocreae translucent, 6--8-nerved; inflorescence elongate, at the upper ends of the stems; perigonium red or rose-colored, 2--2.5 mm. long, persistent; achenes pointed, finely punctulate-striate, black, 2 mm. long.

Nos. 41 to 45. Polygonum Kelloggii Greene & P. Watsonii Small

Two closely related species and sometimes difficult to distinguish. They are small mountain to alpine forms, usually slender and short. In both the mature achene is a pale brown, dull, punctate or very finely striate, 1.5 mm. long, or longer in the form rostratum. The difference between the two is that P. Kelloggii has 3 anthers while P. Watsonii has 8. P. Watsonii also sometimes has white-margined bracts.

No. 45. Polygonum Watsonii Small var. alpinum Brenckle, new

variety

Plantae pumilae graciles 1--3 cm. altae; foliis in bracteas mergentibus, eorum paucis albo-marginatis; inflorescentiis racemiformibus, racemis terminalibus 1--3 compactis; fructibus striatis fuscis 1.5 mm. longis; vel forma rostratum fructibus longioris ad apicem attenuatis.

Dwarf slender plants 1--3 cm. high; leaves merging into the bracts, a few of which have white margins; inflorescence in the form of 1 to 3 terminal compact racemes; achenes striate, dark, 1.5 mm. long -- or longer when the "form rostratum", with attenuated apex, has developed.

No. 46. Polygonum polygaloides Meisn. var. montanum Brenckle, new variety

Haec varietas a forma typica speciei recedit planta compactiora, caulis 4--8 cm. longis gracilibus simplicibus vel ramosis.

Stems 4--8 cm. long, slender, simple or branched; the plant more compact than in the species itself, but otherwise the same. The type was collected by Prof. Ray J. Davis (no. 3283) at White Bird Summit, Idaho County, Idaho.

No. 47. Polygonum confertiflorum Nutt.

Stems slender, wiry, 3--20 cm. long; inflorescence in dense spikes, with white-margined bracts; achene pyramidal, with a somewhat acuminate apex, black, sharply striate, 2 mm. long.

No. 48. Polygonum consimile Greene

"Allied to P. Engelmannii, like it in habit, but larger, less compactly branching, rather more erect, the larger plants a foot high; stems subterete, only the floriferous branches angular, herbage destitute of scurfiness; leaves spatulate-linear, the largest 1 1/4 inches long, veinless, acute, the hardy scabrous margins revolute; stipules when young and untorn bearing 2 or 3 setiform teeth; perianths mostly solitary at the nodes, much more elongated and narrow than P. Engelmannii, and tightly closed over the achene, this with narrowly rhomboid faces and the whole scarcely shining, impressed-punctulate under a strong lens" (Greene in Pittonia 5: 202). The specimens here distributed are from the same general region as those described by Greene, but are somewhat larger and could be referred to P. Douglassii, to which the species is also related. The dull finely punctate achene, however, of P. consimile, closely surrounded by the perianth, serves to distinguish it from P. Douglassii (which has a smooth shining achene) and from P. emaciatum Nelson (which has a striated achene). Some of these specimens have one or more branches with a much con-

densed inflorescence which I consider to be merely a pathological condition. (See P. commixtum).

No. 49. Polygonum Austinae Greene

No. 50. Polygonum Parryi Greene

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Polygonum durum Brenckle, sp. nov.

Planta perennis; caulibus confertis erectis herbaceis; ocreis hyalinis ovalibus, ad apicem dentatis; foliis linearibus sessilibus ut videtur subsucculentis 1.5 cm. longis, 3 mm. latis; perianthis in nodis infimis 3--5 confertis duris persistentibus, ad apicem 5-partitis, limbo brevi patente 0.5--1 mm. longo pallido-viridi rubello-tincto; fructu rotundato-elongato nigro 3 mm. longo, ad apicem triangulari.

Perennial by a slender rootstock, with a crown from which crowded erect herbaceous stems spring; ocreae hyaline, oval, half the length of the leaves, with several teeth at the tip; leaves linear, sessile, appearing to be somewhat fleshy, 1.5 cm. long, 3 mm. wide; perianths crowded about the crown, on the lower nodes of the stems, 3--5 per node; each perianth composed of a hard, tough, enduring membrane closely enveloping and firmly attached to the achene, 5-parted at the tip only, 3 mm. long, with a short spreading limb 0.5--1 mm. long, pale green and reddish-tinted; achene roughened by the attached perianth, round-elongated, triangular at the tip only, black, 3 mm. long.

The type was collected by Gauba at Pic Kuh, near Keredj, in the province of Kazvin, Iran, in 1948, and is K. H. & F. Rechinger, Iter Iranicum II, no. 2034 K. The specimen is small and the tops of the herbaceous stems have been eaten off, which makes it rather unfit for description as the type of a new species. However, the outstanding characteristics of its fruiting parts are nowhere matched in the descriptions of the many known Asiatic polygonums. These characters are unique, cannot be mistaken, and should be recorded. The perianth of P. polycnemoides Jarb. & Spach also closely envelops its achene, but is not firmly attached, the species is an annual, the achene is scarcely 2 mm. long, and the leaves are 1 cm. long and mucronate.

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On Persicaria Oneillii Brenckle

Since publication of this species additional robust material

has been collected by Reverend Ernest Lapage on the sandy shore of a lake and on sand-dunes near Naknek on the Alaska Peninsula. Plants of various sizes were found by him, varying from the large plant described below to the small ones measured and described in the original description.

The stems branch in radial fashion from the top of the tap-root, creeping on the sand, 10 to 30 cm. long, composed of 4 to 6 robust sections, thickened and tapering toward the distal end and 3 to 6 cm. long; ocreae cup-shaped, hyaline or opaque, sometimes with green veins, or smooth, inconspicuously edged with fine bristles, evanescent; leaves lanceolate with a brown spot in the center, tapering to the petiole, 3 to 7 cm. long, 5 to 20 mm. wide.

This description is based on Lepage no. 24111, collected August 28, 1948.

THE FRUIT CHARACTER OF STROPHANTHUS, SECTION SYNCLINOCARPUS

Joseph V. Monachino

The fruit of Strophanthus Bullenianus was described and figured by M. T. Masters in the Gardeners' Chronicle in 1870. It is present on the Kew sheet of Mann 2247, which I consider the type collection of the species.

While no one has hesitated to accept the flowers of S. Bullenianus as genuine Strophanthus, the fruit of the type material of this species, which is detached, has been hitherto adjudged a mixture and rejected altogether from the genus by all outstanding taxonomists who have studied it. This is no wonder, for the long, slender mericarps of S. Bullenianus are clearly convergent, subparallel in drying, whereas those intimately associated with Strophanthus as a whole are strongly divaricate. The seeds of S. Bullenianus are likewise extremely unusual. The seed-coat is closely pubescent with short appressed hairs, as is common in other members of the genus, but is also invested by matted long hairs of the coma. The coma has the appearance of a wad of wool, rather than of distinct and straightish silky bristles. The awn is embedded in the coma. Botanists have with justice, indeed, thought it incredible that such fruit and seeds should actually belong to a Strophanthus.

Otto Stapf (Fl. Trop. Afr. 4 (1): 175. 1902) wrote: "The fruit figured by Masters belongs to a species of Pleioceras." Gilg (in Engler, Monogr. Afr. Pfl.-Fam. 1903: 38) wrote that the seed sent to him by Masters was not of Strophanthus.